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# YUGOSLAVIA REBUILDS MERCHANT SHIPS

A large mess with three long and one smaller table has been installed in the middle of this space. It will accommodate 24 crew members. Baths and dressing rooms are to the left of the mess. There are nine lavatories and four showers with hot and cold water on the right.

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## CLASSIFICATION

# RESUMEN

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On the lower deck, to the right of this space, is a laundry with hot and cold water.

Toward the forecastle are officers' cabins and equipment, the captain's cabin and equipment, plumbing facilities, and the sick bay with two beds and a bath.

On the right side, in the forecastle are quarters consisting of bedrooms, living rooms, and baths for the machinists.

All cabins and rest rooms are supplied with steam heat and hot and cold running water.

On the captain's bridge, the navigator's cabin and the captain's cabin which leads into his office have been enlarged, and a bathroom has been installed.

All alterations and repairs were completed by November.

**OLD CARGO SHIP OVERHAULED** -- Pomorstvo, No 2, Feb 49

The general overhaul of the SS Zuzemberk was begun about the middle of May 1948. On 31 December the ship was put into service, after being completely repaired and refitted.

The Zuzemberk, formerly called the Ivan, was built in 1912 in the Cambeltown shipyard in Scotland. Before World War II it sailed in the Mediterranean. During the war it was taken to the United States where it sailed between various American ports, as it was too old and wornout to sail in convoys.

A Yugoslav military mission in New York arranged the ship's transfer to Yugoslavia, and after some repairs it crossed the Atlantic with a cargo of wheat. Although it met a very severe storm on the way, and in spite of its bad condition, it reached Yugoslavia before the end of the war. This was the first Yugoslav ocean-going vessel returned to Yugoslavia from abroad after the war.

The general overhaul completely transformed the Zuzemberk. Thirty-seven plates, or 25 percent of the outer lining of the ship, several ribs, and about 45 percent of the deck were replaced. The coal bunkers were repaired, new partitions were built, about 85 percent of the plates in the holds, 100 percent of the plates under the boilers, 90 percent of the plates in the scuppers, and all plumbing pipes were replaced. In the forecastle, new masts were set up, a new captain's bridge, new captain's quarters, and a new radio station were built. The ship now has seven instead of four steam-operated cranes. A new smokestack was installed.

Minor repairs were made on main boilers. The main engine was removed and a considerable part of its base replaced. Two new pistons were installed in the high and intermediate pressure cylinders, and all three eccentric rods were replaced. New white metal was poured into the bearings of the high, intermediate, and low-pressure cylinders and into the main crankshaft bearings. A new column was installed on the low-pressure cylinder. A new piston was installed in the circulation pump. The condenser, all tubes, ballast pump, cranes, and dynamo were overhauled and cleaned. A machine for removing ashew has been installed. A new electric light system also has been installed.

Particular attention has been paid to equipping living quarters for the crew. Nine new two-bed cabins, a mess, toilet, laundry, and showers were built in the forecastle. Hot and cold running water has been piped to every room. Officers' quarters, the salon, and the scullery have been rebuilt, and a new refrigerator has been installed for the crew.

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About 39 percent of the total expenditure on the overhaul was used to improve living quarters for the crew.

The SS Zuzemberk has a carrying capacity of 2,080 tons.

#### **MOTOR SHIP REBUILT -- Pomorstvo, No 2, Feb 49**

After 4 months in the "Uljanik" Shipyard in Pula, the motor ship Topusko was put into service on 29 December. The Topusko, a cargo-passenger ship, was built in Hamburg in 1925, with a carrying capacity of 4,360 tons, passenger capacity 34 in 16 double and two single cabins, and is driven by a four-cylinder double-acting two-stroke MAN (Mannheim, Augsburg, Nurnberg) Diesel engine. The engine, built in 1930, develops 2,200 effective horsepower, and 2,750 indicated horsepower with a maximum of 125 revolutions per minute. Its speed is 12 knots an hour.

The ship was assigned to the Yugoslav Navigation Line in 1947. After certain repairs it was put into service about mid-February 1948.

Although the ship had been overhauled, the living quarters for the crew had not been altered. Consequently the ship was withdrawn from service after several voyages in the Mediterranean and laid up in the "Uljanik" Shipyard for reconstruction of living quarters.

Two four-bed cabins have been built under the forecastle, as well as a rest room with four lavatories and two showers, baggage rooms, a ship's carpentry shop, and a cordage store.

Major repairs were made amidships. The officers' cabins on A deck were rebuilt, enlarged, and redecorated. Much of the wood and ironwork on A deck was replaced. On B deck, nine passenger cabins were refurnished and redecorated, as were the captain's cabin and the ship's offices. On C deck, the smoking room, the ship's bar, and the crew's cabins were renovated and refurnished, and one cabin was made into a sick bay. On D deck a scullery, a food storage room, refrigerators, ovens, a mess, and rest rooms were equipped.

In the steerage 10 double and two triple cabins, a baggage room, a room for working clothes and raincoats, and rest rooms were built.

Electric lighting and steam heating were installed in all the rooms. The cabins and passages were painted and tastefully and substantially furnished.

The ship's crew removed rust from the outer plates, painted all walls where work was being done, cleaned storerooms, inspected the main and auxiliary engines and the auxiliary boiler, cleaned the engine room and tunnel, and installed a 200-volt electric cable. While in drydock they opened, inspected, and refitted all the sea cocks.

#### **YUGOSLAVIA BUILDS FIRST MARINE STEAM ENGINE -- Pomorstvo, No 1, Jan 49**

At the end of World War II, the unfinished keels of three tugs lay amid the wreckage of the "3 Maja" Shipyard in Rijeka. Construction of the tugs was started during the war, but they were badly damaged by enemy bombardment and construction was not resumed until after war ended and the shipyard had been rebuilt.

The greatest problem involved was building power machinery. Plans for the tugs called for steam engines. Before the war, ship's machinery had never been built in Yugoslav shipyards but had always been imported. No workers with experience in building such machinery were available. However, skilled workmen at the shipyard learned, by studying existing machinery of the required type, how to construct and assemble the necessary parts.

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Three boilers and three complete steam-operated engines had to be built. The first engine was cast, tested, and installed successfully in the first tug. The second engine, which passed tests even more successfully than the first, has been installed in the second tug. Neither engine had to be cast more than once, despite the inexperience of the workers. Parts for the third engine have now been completed.

The engine is a triple-expansion engine with three cylinders and a condenser. It operates at 13 atmospheres pressure, and makes 130 revolutions per minute to develop 600 horsepower.

The base of the engine is of cast iron and is in three parts fastened together by screws. The cylinders, pistons, piston rings, and distributors also are cast iron. Other working parts are of forged steel. The cylinders are screwed together.

The first boiler showed excellent results when tested with 23 atmospheres of water pressure. The second boiler also was completed successfully. Even boilers made abroad have never shown better results under water pressure.

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